

Amendments to the Specification:

Please replace paragraph 0005 with the following amended paragraph:

Conventionally, size reduction of transmission lines is accomplished by using meander line structures. Please refer to Fig. 1. Fig. 1 is a diagram of a prior art

5 meander line structured transmission line with two ports P11 and P12. Utilizing the meander line structure reduces the size of the required transmission line, but the resulting circuit area is still too large for the requirements of modern wireless handheld devices. Alternatively, lumped-element realizations of transmission line may

be employed. Please refer to Fig. 2 and Fig. 3. Fig. 2 is a diagram of a prior art

10 T-equivalent circuit of a transmission line and Fig. 3 is a diagram of a prior art π -equivalent circuit of a transmission line. L21, L22, and L31 are inductors and C21, C31, and C32 are capacitors. P21 and P22, and P31 and P32 are ports of the transmission lines in Fig. 2 and Fig. 3 respectively. The circuits in Fig. 2 and Fig. 3 are accomplished by using lumped inductors and capacitors to realize the T- and

15 π -equivalent circuits of transmission lines to reduce circuit size. Fig. 4 is a diagram of frequency response of a prior art T- or π -equivalent circuit of a transmission line compared to that of an ideal transmission line. In Fig. 4, the transverse axis represents frequency, and the vertical axis represents amplitude in dB. S11A and S21A are the reflection coefficient and transmission coefficient of an ideal transmission line, and

20 S11B4 and S21B4 are the typical reflection coefficient and transmission coefficient of prior art T- or π -equivalent circuits of transmission lines. As shown in Fig. 4, these equivalent circuit models may only be considered as equivalents to ideal transmission lines in a very narrow bandwidth around the center frequency f_0 as the deviations in transmission and reflection coefficients at frequencies away from f_0 are quite large.

25 For example, the difference between S21A and S21B4 at f_1 is as large as d4 on the frequency response chart. In addition, the transmission coefficients for T- and

π -equivalent circuits of transmission lines decrease rapidly above f_0 . These limit the usage of these equivalent-circuit models to narrow band applications. However, most recent RF systems occupy a wide frequency bandwidth and require wide-band circuit

30 elements to keep favorable characteristics in the whole frequency band. Moreover, for multi-band RF communication systems, it is also required that the transmission line

equivalent be operated at multiple frequencies.